

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
 )  
Inquiry Regarding Carrier Current Systems,) ET Docket No.  
03-104  
Including Broadband over )  
Power Line Systems )

REPLY COMMENTS OF DANIEL E. STREET

1) Florida Power & Light Company ("FPL") writes in their  
Comments (Document Date 7/2/03):

"... BPL vendors have demonstrated sincere efforts to  
ensure that their technology, provisioned as an  
unintentional radiator, does not interfere with FCC  
regulated radio bands and will indeed meet FCC Part 15  
requirements."

The fundamental flaw in BPL is not in the ultimate delivery  
within the consumer's home or business; rather it lies with  
the delivery methodology of using an eroding infrastructure  
that was designed for something completely different.  
Power companies use unshielded cables for delivery, a very  
important distinction from Broadband over cable.

Thus, the carefully worded phrase in the quoted paragraph  
refers to compliance in the future, but not now. This is a  
veiled admission that BPL is not currently compliant.  
Those "sincere efforts" are appreciated, but until they  
result in compliance, should not be allowed in practice.

Allowing wideband interference to emanate from power lines  
and pollute the radio spectrum is no different than  
allowing a manufacturing plant to dump unfiltered  
wastewater into a river.

2) Florida Power & Light Company ("FPL") also writes in  
their Comments (Document Date 7/2/03):

"FPL believes that arguments voiced by amateur radio  
forums ... remain unsubstantiated and speculative  
without direct evidence that BPL vendors' technologies

cause interference in excess of approved limitations established by FCC guidelines."

To address that speculation, please refer to extensive testing conducted by the ARRL:

<http://www2.arrl.org/news/stories/2003/08/08/2/?nc=1>

Interference FROM BPL systems is a very substantial and substantive concern.

3) Gary Thornton, writes in his Comments (Document Date 7/2/03):

"In a recent FCC proceeding, the electric power industry objected to the creation of a new amateur radio band in the VLF region on the basis that even a one-watt signal from an amateur radio station could couple into the power lines and disrupt the power companies' VLF control signals. The FCC agreed with this concern, and rejected the petition to create the VLF amateur band.

Amateur radio operators are authorized 1500 watts in the 1.8 - 54 MHz range. One thousand, five hundred times the power level the power companies said could cause interference to their systems.

On top of that, power lines are much more efficient as antennas in the 1.8 - 80 MHz range than they are in the VLF range. Other users of the 1.8 - 80 MHz spectrum also use high power levels. If one watt of RF coupling into the power lines is a problem, then BPL faces an immense problem of interference from the licensed users of this spectrum."

This addresses the reverse situation of interference TO BPL systems. The 1500-watt limit for amateurs is miniscule compared with limits in other licensed services within the spectrum in question and Effective Radiated Power (ERP) can be many times that, due to the proliferation of directional antennas within the spectrum in question. Such transmissions are fully within FCC guidelines.

4) Reply Comments from Harris Corporation (Document Date 8/19/03):

"Harris is an international communications equipment company with five operating divisions that offer products and services in the microwave, broadcast, network support, secure tactical radio, and government communications systems markets."

"Harris respects the Commission's interest in supporting the deployment of broadband services by utilizing BPL technologies. However, that interest must be balanced against the reality that BPL will cause harmful interference to existing services, including broadcast services and home entertainment systems, in particular. The Commission must require the nascent BPL industry to conduct comprehensive interference studies to identify the interference problems and acknowledge the serious interference issues posed to authorized services in general and broadcast services in particular."

Thus, a Government contractor and the emerging Digital Television industry join in the opposition.

Other Comments address the impact on Mobile aeronautics, impact on spectrum users outside the USA and on Medical equipment.

#### 5) US Armed Services

As an interested citizen, I frequently monitor the US Military frequencies that coordinate flights to/from Iraq and the Middle East. Often, signals are at a level that allow successful communication without interference, but at a level at which communication would be disrupted with only a few dB of interference.

#### 6) ECFS input

May I suggest that the FCC consider a modification to the on-line input page for ECFS. Specifically, I see that of the 271 Comments posted to date from the state of Florida, 209 of them are likely to be deemed invalid because they are posted after the July 7, 2003 closing date for Comments and should have been posted as "Reply Comments". If a simple edit were placed on the input page to compare the Document Type and Current Date with the deadline for receipt of that Document Type (and warn or reject entries after the deadline), then posters would not be allowed to waste their time inputting a document that will likely not be considered by the FCC.

### **Conclusion**

The utility companies and other BPL vendors commenting in this proceeding have failed to demonstrate that their BPL systems can operate at HF and VHF frequencies without causing harm to Amateur Radio and other services. Such harm will seriously undermine the ability of Amateur Radio to fulfill its mandate under the Communications Act and the Commission's Rules as a national volunteer emergency communications resource. Commissions in Japan and in several European countries have already investigated BPL and rejected it. Based on the record, the Commission should terminate this proceeding with a finding that BPL is not technically compatible with existing services and would be detrimental to the public interest. Alternatively, I would urge the FCC to consider tightening part 15 rules and enforcement, not relaxing rules that are already too loosely followed.

Sincerely,

/s/

Daniel E. Street  
9933 289 St. E.  
Myakka City, FL 34251  
Amateur Radio Operator K1TO, Extra Class  
President, Florida Contest Group